IN THE CLAIMS

Kindly consider the following amended claims:

51. (Three Times Amended) The transgenic mouse according to claim 15, wherein said another transgene is a gene controlling differentiation of a cell or development of an organism selected from the group consisting of genes encoding G1 adhesion molecules, cyclin kinase inhibitors, Wnt family members, Pax family members, Winged helix family members, Hox family members, cytokines, interleukins, growth factors, differentiation factors and their receptors, kinases, phosphatases, metabolic enzymes, and antigen receptors.

52. (Twice Amended) A transgenic mouse comprising a Flp recombinase transgene integrated into the genome of the transgenic mouse, wherein the Flp recombinase transgene is expressed from a tissue specific or a developmental stage G2 specific promoter in at least one cell of the transgenic mouse at a level sufficient to catalyze recombination between two FLP-recognition sequences in direct repeat orientation in said cell, wherein said recombination is detected by activation of a gene expressed from a ubiquitous promoter, wherein said gene produces a detectable product only when in recombined form.

59. (Twice Amended) A method of mapping the developmental fate of a cell *in vivo* comprising:

G3 (a) providing a transgenic mouse comprising a genome which contains a Flp recombinase transgene under control of a tissue-specific or

developmental stage specific promoter and at least two FLP recognition sequences in direct orientation;

(b) expressing the Flp recombinase transgene at a level sufficient to catalyze site-specific recombination between said FLP recognition sequences in at least one cell; and

G3 (end)

(c) detecting said recombination in said at least one cell by detecting activation of a gene expressed from a ubiquitous promoter, wherein said gene produces a detectable product only when in recombined form, and wherein said recombination is evidence of expression of said Flp recombinase transgene in said cell or a developmental precursor to said cell.